

AN IMPROVED STAPLER

BACKGROUND OF THE INVENTIONClaim of Priority

The present application is a "continuation-in-part" patent application of previously filed, now pending design patent application having Serial No. 29/189,012 filed on August 26, 2003, which is a continuation-in-part design patent application of previously filed, having Serial No. 29/151,864 filed on December 11, 2001, which issued into U.S. Design Patent No. D478,797 on August 26, 2003, also incorporated herein by reference.

Field of the Invention

The present invention relates to an improved stapler that is preferably compact and highly manipulable, and in addition to providing for facilitated use in order to staple a plurality of articles with one another also conveniently includes structure to significantly facilitate the opening of envelopes and/or packages. In that way, a user tasked with opening a large number of envelopes and/or packages can quickly and easily open those articles and conveniently and without interruption to manipulate an additional device, is able to effectively staple documents and/or articles to one another, such as stapling the envelope to a correspondence contained therein for organization after disbursement and during review of the articles received.

1 DESCRIPTION OF THE RELATED ART

2 Staplers are very popular, commonly utilized office tools
3 employed numerous times on almost a daily business by many
4 individuals. Naturally, a primary source of utilization for
5 staplers is in the stapling of a variety of documents with one
6 another so as to prevent the loss or misplacing of one or more
7 articles which relate with one another. Moreover, due to the
8 popularity of staplers, many different shapes, styles and sizes of
9 staplers have been developed, ranging from large multi-document
10 staplers to compact mini-staplers. All of these staplers, however,
11 have the same basic and limited, albeit very useful, functionality
12 of passing the prongs of a staple through one or more sheets, and
13 binding them together by bending and/or looping the prongs.

14 In addition to staplers, another important office product that
15 has been developed over the years in a variety of different styles
16 and configurations is the letter opener. In particular, letter
17 openers have been developed and utilized so as to facilitate the
18 quick and rapid opening of envelopes and/or packages for
19 appropriate sorting and/or review of the contents of these
20 documents. Typically, however, the use of a letter opener so as
21 to open and subsequently organize and/or review documents contained
22 within an envelope is a singular task that requires a substantially
23 amount of follow up. For example, a person tasked with opening
24 hundreds of envelopes may very well go through the opening of the
25 envelopes very quickly and perform an initial degree of sorting of

1 the documents contained therein, however, they are generally forced
2 to utilize a rudimentary stacking system if they wish to proceed
3 through the envelope opening at a generally rapid pace. Of course,
4 it is recognized that it would be preferable if the envelope and/or
5 package opening process could be effectively associated with an
6 increased form of organization, such as stapling documents with one
7 another and/or stapling an envelope with its contents at the time
8 of opening and/or sorting. In this manner, disruption of the stacks
9 will not lead to a loss of documents or the need to later perform
10 an additional time consuming task. Of course, utilizing
11 traditional office equipment, such techniques can be cumbersome and
12 do not permit a free flowing and/or rapid pace to be exhibited if
13 both tasks are to be performed. As a result, it would be highly
14 beneficial to provide an improved stapler which is effectively
15 equipped with structure to facilitate the opening of envelopes
16 and/or packages in a manner that does not interfere with the normal
17 use and/or operation of the stapler, but which also allows for
18 convenient and effective letter opening utilization. Further, such
19 an improved stapler should be effectively configured so as to
20 minimize the need for awkward manipulation and/or repositioning of
21 the device within the hands of the user, thereby permitting
22 extensive continued use.

23 Additionally, unlike prior art devices which incorporate a
24 letter opener with other office equipment such as a staple remover,
25 the novel and convenient integration of letter opening capabilities

1 with an improved stapler is effective and symbiotic towards a
2 primary and demanding task associated with the use of this
3 equipment. Indeed, the present invention recognizes the need for
4 more than merely a device which combines multiple functionalities,
5 but rather for an improved stapler that effectively increases the
6 functionality of a stapler in a novel fashion that maximizes the
7 beneficial utilization of all functional components of a device
8 during repeated, generally contemporaneous utilization of all of
9 the different functionalities.

11 SUMMARY OF THE INVENTION

12 The present invention relates to an improved stapler. In
13 particular, the improved stapler includes a pair of arms that are
14 pivotally secured in confronting relation with one another in a
15 manner similar to that of a traditional stapler. Specifically, one
16 of the arms contains a plurality of staples and thereby is
17 configured to dispense one of the staples towards the other arm
18 when it is pivotally moved towards that other arm and meets
19 resistance.

20 Further provided with the improved stapler of the present
21 invention is an opener segment. In particular, the opener segment
22 extends along at least a portion of at least one of the arms.
23 Also, the opener segment includes a proximal end and a distal end,
24 the proximal end being secured to one of those arms. Moreover,
25 disposed between the opener segment and the arm is a blade. The

1 blade is disposed at generally the proximal end of the opener
2 segment such that when an at least partially tapered distal end of
3 the opener segment is introduced at a fold made by a closure flap
4 of an envelope, the opener segment may be pushed sufficiently into
5 the envelope until the blade engages the envelope and cuts it,
6 facilitating the opening of the envelope and removal of it's
7 contents. This removal can then be followed by immediate stapling
8 of the contents with one another and/or with the envelope in which
9 they were contained.

10 These and other features and advantages of the present
11 invention will become more clear when the drawings as well as the
12 detailed description are taken into consideration.

13 14 BRIEF DESCRIPTION OF THE DRAWINGS

15 For a fuller understanding of the nature of the present
16 invention, reference should be had to the following detailed
17 description taken in connection with the accompanying drawings in
18 which:

19 Figure 1 is a perspective illustration of the improved stapler
20 of the present invention in operative use to open an envelope;

21 Figure 2 is a side view of the improved stapler of the present
22 invention; and

23 Figure 3 is a bottom view of the improved stapler of the
24 present invention.

25 Like reference numerals refer to like parts throughout the

1 several views of the drawings.

2
3 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

4 The present invention is directed towards an improved stapler,
5 generally indicated as 10. In particular, the improved stapler
6 preferably includes a pair of arms 20 and 30, preferably stapler
7 arms, pivotally secured with one another in confronting relation.
8 Specifically, as illustrated in Figure 1, each of the arms 20 and
9 30 preferably includes a first end 21 and 31, respectively, and a
10 second end 22 and 32, respectively. In the illustrated embodiment,
11 the arms 20 and 30 are pivotally secured with one another generally
12 at their respective first ends 21 and 31 thereof so that the second
13 ends 22 and 32 may move towards and away from one another. Looking
14 further to the preferred, illustrated embodiment, a first arm 20
15 may be defined as an upper arm which contains and dispenses staples
16 15 for use to secure a multitude of articles with one another. As
17 such, in this preferred embodiment, the first arm 20 may include a
18 cover segment 23 which is pushed down by a user, and a carrier
19 element 24. The carrier element 24 is preferably configured to
20 hold a large, aligned number of staples 15 therein in a
21 conventional manner so that they may be dispensed one at a time via
22 an opening defined generally at the second end 22 of the first arm
23 20. In this regard, a plunger or other type element as is
24 typically found within a stapler may be positioned so as to
25 dispense the staples 15 upon pushing down of the cover element 23.

1 Moreover, the cover element 23 is preferably configured to pivot
2 independent from the carrier element 24 so as to expose an interior
3 of the carrier element 24 for loading of the staples. Conversely,
4 the second arm 30 in the illustrated embodiment preferably defines
5 an abutment against which resistance is met during downward or
6 compressing pushing of the first arm 20, so as to achieve
7 dispensing of a staple 15 in a conventional fashion. Along these
8 lines, a mold plate 34 may be provided in the second arm 32 so as
9 to effectively achieve appropriate curling and/or binding of the
10 staples 15 as desired.

11 Although the first and second arms 20 and 30 may generally
12 overlap at their respective first ends 21 and 31 so as to achieve
13 the relative pivotal positioning required for dispensing, in a
14 preferred, illustrated embodiment, the second arm 30 may include
15 one or more upwardly depending pivot posts 35 at which the first
16 arm 20 is pivotally secured. Regardless of the manner of pivotal
17 securement, however, one or more articles which are to be stapled
18 with one another are preferably disposed between the confronting
19 second ends 22 and 32 of the first and second arms 20 and 30 such
20 that pushing of the arms 20 & 30 towards one another will result in
21 the passage of the staple 15 through the articles and the fastening
22 of those articles with one another.

23 Extending from preferably one of the arms 20 or 30 is an
24 opener segment 40. In particular, the opener segment 40 is
25 structured to facilitate the opening of an envelope 50 or package.

1 In the preferred, illustrated embodiment, the opener segment 40 is
2 secured to the second arm 30 and may be generally co-planar there
3 with, such as along a bottom surface. Of course, a more staggered
4 alignment is also possible. Looking in detail to the opener
5 segment 40, it preferably includes a proximal end 42 and a distal
6 end 44. Preferably, the proximal end 42 will be secured to and can
7 be integrally formed with the second arm 30. Moreover, the opener
8 segment 40 preferably extends along at least a portion of a length
9 of the second arm 30, as seen in the figures, in generally parallel
10 relation thereto. In order to facilitate an effective introduction
11 of the distal end 44 of the opener segment 40 into at least a fold
12 52 defined by a closure flap of an envelope 50, the opener segment
13 40 preferably has a generally tapering configuration towards the
14 distal end 44. In this regard, the distal end 44 may be said to
15 generally define a point, and will generally be spaced from the
16 second arm 30 so as to further facilitate the slided passage of the
17 opener segment 40 in an opening manner within the fold 52 of an
18 envelope 50.

19 Disposed between the opener segment 40 and the second arm 30
20 is a blade 60. In particular, the blade 60 is preferably angled
21 towards the distal end 44 of the opener segment as seen in the
22 figures. Additionally, although the blade 60 may be connected to
23 both the opener segment 40 and the second arm 30, it may be
24 preferred that the blade 60 be at least partially embedded and
25 thereby secured within the opener segment 40, with an appropriate

1 cutting edge portion exposed. During use, it is the blade 60 that
2 ultimately engages the envelope 50 and causes a cutting and
3 therefore opening of the envelope 50. Also, turning to Figure 1,
4 although in many embodiments it may be sufficient for a perimeter
5 of the second arm 30 to confront an interior of the opener segment
6 40, a guide ridge 46 may also be provided so as to effectively
7 guide an article to be opened onto the blade 60 and further
8 facilitate opening. This guide ridge 56 may also be secured and/or
9 integrally formed with the second arm 30.

10 It is also recognized that the distal end 44 of the opener
11 segment 40 preferably is directed towards the second end 32 of the
12 second arm 30 in a manner whereby the opener segment can be said to
13 be generally parallel with the second arm 30. Further, by
14 directing the distal end 44 towards the second end 32 of the second
15 arm 30, substantially increased convenience for utilization can be
16 achieved, as a user need not reorient or re-manipulate the improved
17 stapler 10 within their hand in order to achieve both opening
18 functionality and subsequent stapling functionality. As can be
19 appreciated this can achieve a significant time savings and
20 increase the smooth and continuous utilization by a user tasked
21 with the job of opening a large number of envelopes and securing
22 their contents to one another and/or to the envelopes 50 from which
23 they were withdrawn.

24 Finally, turning to Figures 2 and 3 it is also seen that a
25 wedge element 38 may also protrude from one of the arms, and

1 preferably the second arm 30. In the illustrated embodiment this
2 wedge element 38 protrudes from the first end 31 of the second arm
3 30 and includes a generally narrow and/or pointed configuration.
4 As a result, this wedge element 38 may be utilized so as to remove
5 and/or pry-off a staple 15 from an article. In particular, in use
6 the wedge element 38 is slid under the staple 15 and a degree of
7 leverage is applied so as to open the clasping ends of the staple
8 15 and facilitate the removal thereof. Accordingly, if a staple is
9 introduced into one or more articles utilizing the present improved
10 stapler 10, yet that stapling is in error or must otherwise be
11 undone, a rapid and convenient means for removing the staple 15 is
12 conveniently present.

13 Since many modifications, variations and changes in detail can
14 be made to the described preferred embodiment of the invention, it
15 is intended that all matters in the foregoing description and shown
16 in the accompanying drawings be interpreted as illustrative and not
17 in a limiting sense. Thus, the scope of the invention should be
18 determined by the appended claims and their legal equivalents.

19 Now that the invention has been described,